

Abstract of the Disclosure

Techniques and instrumentalities to improve ISI and ICI cancellation in reception of modulated symbols by selectively decoding subsymbols of such modulated symbol before they can be completely decided or perceived as well as use of decoded symbol/subsymbol information in the feedback equalization process are disclosed. In particular, a decoder and corresponding method are disclosed which includes a feedback equalizer capable of receiving a modulated signal including a symbol defined by a first number of chips, along with a subsymbol processor to generate a subsymbol waveform upon receipt of a second number, less than the first number, of chips of such symbol and provide the subsymbol waveform to the feedback equalizer in order to equalize the modulated signal using the subsymbol waveform. Other disclosed aspects including techniques and instrumentalities for improving reception performance when symbols encoded by different modulation schemes are encountered, as well as feedback equalization for Barker encoded symbols present in the received signal.